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TITLE: OPTICAL ELEMENT, ILLUMINATOR AND PHOTOGRAPHING  
DEVICE

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INVENTOR-INFORMATION:

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ABSTRACT:

PROBLEM TO BE SOLVED: To constitute an optical system asymmetrical with the optical axis, which can be changed in optical characteristics by electrowetting effect, using two kinds of liquids insoluble in each other.

SOLUTION: This optical element has at least the first liquid 121, having electrical conductivity and the second liquid 122 having immiscibility with the

first liquid and having a refractive index different from the refractive index of the first liquid, a container constituted to have a first surface 104 orthogonal with the optical axis 123 and a pair of second surfaces 105c and 105d, arranged to face each other to intersect with the front surface and to house the first and second liquids. Adsorption layers have absorptivity for at least one liquid of the first and second liquids are formed on the first surface and the second surface. A boundary 122d of at least the second surfaces of the first liquid and the second liquid intersecting with the adsorption surfaces is formed and the shape of the boundary is changed, according to a change in the impression voltage between a first electrode 125 for energizing the first liquid and a second electrode 103 disposed on the container side.

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